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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,415	04/26/2000	Mirosław Z. Bober	0054-0205P-SP	1497

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EXAMINER

TO: BACQUON

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 11/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/559,415

Applicant(s)

BOBER, MIROSLAW Z.

Examiner

Baoquoc N To

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-15 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 16-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-15 and 33-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-3, 5, 11-15 are withdrawn, claims 4, 16-32 are cancelled, claims 6 and 9 are amended, claims 33-35 are newly added claims on the amendment filed 09/12/03.

Response to Arguments

2. Applicant's arguments with respect to claim 6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eakins et al. (Retrieval of trade mark images by shape feature-the ARTISAN project, Intelligent Image Databases, IEE Colloquium, Page 9/1-9/6, May 22, 1996) in view of Applicant Admission of prior art (Page 2, lines 1-6).

Regarding on claim 6, Eakins teaches a method of searching for an object in still or video images by processing signals corresponding to image, the method comprising:

Associating the two or more view descriptors to form at least one stored object descriptor containing the view descriptor (grouping of region boundaries into families) (page 2, lines 17-23),

Inputting a query to the computer in the form of at least one two-dimensional outline of the object (page 2, line 35);

Deriving a descriptor of the query object (page 5, lines 1-11);

Comparing said query descriptor with said object descriptor (page 2, lines 36);

Selecting and displaying at least one result corresponding to an image containing an object for which the comparison between the respective descriptor and the query descriptor indicate a degree of similarity between the query and said object (page 2, line 37 and page. 4, lines 33-36).

Eakins does not explicitly teach deriving a view descriptor of the first outline of a three dimensional object, deriving at least one additional view descriptor of the outline of the object in a different view. However, Eakins teaches, "This module derives a set of shape features of the image at three different levels: the entire image, each proximal family, and each individual boundary. We are still experimenting with alternative set of shape features and ways to associating them with image component" (col. 4, lines 11-14). This teaches that the entire image is first outline of the object and the additional view descriptor is each proximal family or each individual boundary. In addition, the applicant also submitted that, "in most cases, an object as it appears in a video is a projection of a 3-dimensional real object onto a 2-dimensional image plane. The 2-dimensional shape or outline of an object appearing in an image thus depends on factors such as the viewing position, viewing angle and camera and optical system parameters. Object will therefore have different view outlines associated with different views" (applicant specification, page 2, lines 1-6). The submission indicating that an

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object of 3-dimensionals can be derived into 2-dimensional is known in the art.

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modifying the entire image as one view and each proximal is at least another view in order to allow all the image features to be extracted and stored in the database and also allowing the user to search for these features to obtain the image.

Regarding on claim 7, Eakins a query is input in the form of two or more two-dimensional outlines of an object, and wherein a query view descriptor is derived for each said outline, and wherein the step of comparing comprises comparing each said query view descriptor with each view descriptor in each stored object descriptor to derive a plurality of view similarity values (col. 2, line 36).

Regarding on claim 8, Eakins teaches the view-similarity values are analyzed to derive object similarity values (computes appropriate similarity scores) (page. 4, line 34-35).

Regarding on claim 9, Eakins teaches at least some of the object descriptor include view-independent descriptors derived in accordance with the method of claim 3 and wherein the method comprises inputting a view-independent query value and the step of comparing compares the query value with the view-independent descriptors for the stored object descriptor (page 4, lines 33-36).

Regarding on claim 10, Eakins teaches the query descriptor is derived using a curvature scale space representation of the query object outline (page 5, lines 6-11).

4. Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rioux et al. (US. Patent No. 6,016,487).

Regarding claims 33, Rioux teaches a method of searching for an object in still or video images by processing signals corresponding to image, the method comprising:

Receiving a query descriptor representing with a plurality of stored descriptors each representing an identical tree-dimensional object in a different view (a search of plurality (a series of criteria is extracted from a three (3) dimensional search criteria image) (col. 5, lines 31-33);

Comparing (compared) the query descriptor with a plurality of stored descriptors each representing an identical three-dimensional object in a different view (col. 5, lines 33-36); and

Selecting the three-dimensional object when one of the stored descriptors matches the query descriptor (each object model is analyzed in dependence upon the search criteria and weighting to locate close matches) (col. 6, lines 7-10).

Regarding on claim 34, Rioux teaches the query descriptor is derived using a curvature scale space representation of an outline of the query object (scale) (col. 4, lines 1-4).

Regarding on claim 35, Rioux teaches the stored descriptor is derived using a curvature scale space representation (scale) of an outline of the three-dimensional object (col. 4, lines 1-5).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached at (703) 305-4393.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

- (703) 746-7238 [After Final Communication]}
- (703) 746-7239 [Official Communication]
- (703) 746-7240 [Non-Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II


2121 Crystal Drive

Arlington, VA 22202

Fourth Floor (Receptionist).

Baoquoc N. To

Nov 10, 2003


SHAHID ALAM
PRIMARY EXAMINER